

When you start to think about insulation, check to see whether you've taken all the easy, low-cost conservation steps in your home.

Do the Easy Things First

And the savings add up. A 20 per cent reduction by every Ontario homeowner in household energy consumption would conserve enough energy per year to heat half a million homes.

An insulated house is a comfortable house — it can do even more than that for you. Fewer drafts, fewer cold walls in winter, reduced outside noise and even cooler in summer. That's not all. Your insulation investment will enhance the resale value of your home.

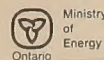
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Insulation

blanket your home!

Insulating for Comfort and Profit



The RSI-value is the metric equivalent of R-value. The RSI-value is usually printed in large letters on the package.

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The R-value

Determine how much insulation you need and what kind. Here are a few tips to help you.



Now Consider Insulation

- Keep your thermostat at 68° F (20° C) during the day and set it back to 63° F (17° C) at night, or when everyone is out during the day.
- Put weather stripping (strips made from various materials available at most hardware stores) around the edges of doors. The best weather stripping is a type that keeps its shape and exerts a tight seal on the door.
- Buy some caulking at a local store and seal around the inside edges of window frames.
- You may have to remove the trim to do this effectively.
- Keep your furnace cleaned and tuned.
- Make sure you have an annual event.

Do-it-yourselfers, keep these tips in mind:

1. Provide lots of working light.
2. If you're working in the attic, lay boards on the joists to form a walkway. Ceilings won't support your weight.
3. Wear a hardhat, goggles, gloves and a breathing mask to prevent injury and irritation from dust and fibres.
4. Don't cover any recessed lighting fixtures with insulation — keep insulation at least six inches away from the sides of recessed fixtures to avoid fire hazards.

When contracting, remember the following:

1. Specify your needs in terms of R-value to be installed, not in inches of insulation.
2. Get written estimates from at least three contractors. Ask friends and neighbours to recommend good contractors.
3. Ask each contractor for a list of past customers. See if they were satisfied with his work.
4. Check your Better Business Bureau to ensure your contractor is reliable.
5. Insist on a detailed, written agreement. Make sure it includes:

- a complete description of the job.
- a list of materials including brand names, quantities and CMHC number.
- the total statement on materials and labour including any finance charges.
- a warranty statement on materials and labour including any liability provisions.
- the dates for starting and completing the job.
- a dated signature of the contractor on a completed form.

When the contractor says the work is finished, inspect it with him, if possible. Be sure you get what you ordered.



What Kind of Insulation?

The choice of material is a matter of judgment. Some insulation is more suitable for certain areas of the house than others. Construction features can limit your choice to certain kinds of materials. Price can also be important.



Location	R-value	RSI-value
attics	R 28	RSI 4.93
walls	R 12	RSI 2.11
floors over unheated space	R 20	RSI 3.52
basements	R 8 **	RSI 1.41
unheated crawl spaces	R 20	RSI 3.52

** If the basement wall is fully exposed, it should be insulated to R 12 as though it were a regular wall.

Take a close look at your attic, walls and foundation before deciding.

Attics are often the easiest places to start. But attic insulation is not always the most cost effective measure. First, find out how much is already in your attic. There are a couple of ways you can achieve R 28. You can add batts or blankets (a total of about 8 inches or 20 centimetres are required for R 28). However, if you are adding additional batts, they should not be slashed over a vapour barrier. You can also pour bags of loose fill insulation between the ceiling joists. Or you can hire a contractor to blow in loose fill.

Flat roofs are problem areas. You may have to lower the ceiling and install the insulation between a false ceiling and the existing roof.

Where to Insulate

- **Batts and blankets** are made of glass fibre or rock wool. They can be used in the attic, or on roof walls. They can be used for new or basement walls, under exposed floors. Blankets can also be used for wrap-ping exposed heating ducts.
- **Loose fill insulation** is made of glass fibre, rock wool, cellulose fibre or vermiculite. It can be used in attics as well as crawl spaces and wall cavities.
- **Rigid boards** include phenolic foam board, various types of polystyrene, and rigid glass fibre board. They can be used in walls and basements, both inside and out. Except for glass fibre board, these materials must be protected against fire with gypsum wallboard.
- **Foamed-in-place insulations** include urea formaldehyde and polyurethane. They can be pumped into existing walls where they are available. On the other hand, you might find it impossible to add the minimum amount because of your home's construction characteristics.

This is due to the limited existing space and the need for some air circulation above the insulation.

Adequate ventilation is essential when insulating the attic. Ventilation can make the difference between a good insulation job and one that actually damages your house. Check your local building department for the Ontario Building Code requirements for your type of house, and read a detailed description in *Keeping the Heat In* (address on back of pamphlet), if you have further questions.

Basement walls lose a great deal of heat, especially the part above ground. You should aim for R 8 at least down to two feet (0.6 metres) below ground level if less than half the wall is exposed. For a little extra money, you might want to insulate the whole wall and cover it with a fire-resistant material. A fully exposed basement wall should have R 12 right to the floor.

Basement walls can be insulated from the inside or the outside. Batts, blankets or rigid boards can all be applied to the inside of the walls, while extruded polystyrene can be applied to the outside of masonry walls.

Walls (existing) are the hardest place to insulate. There are, however, a number of options. If space and money allow, you should aim for R 12.

- **Renovation.** If you are planning to renovate your home, you can take off existing wallboard or plaster and insulate the wall with batts or rigid boards as you would a new one. Add a vapour barrier to guard against moisture damage. Then install the drywall.
- **Interior insulation on frame or masonry walls.** When you don't want to tear down the existing wall, you can apply new insulation, usually rigid panels, to the inside surface of existing walls, and recover with fire resistant gyproc.

- **Blown-in insulation for frame walls.** If you have frame walls, you can have a contractor blow in loose fill insulation. He can usually do this from the outside by making small openings in the exterior finish. If the exterior is brick or stucco, he may have to drill holes from the inside. Make sure these holes are plugged when he's finished.
- **Foamed-in-place insulation.** The cavity in older wood-frame houses and occasionally in some masonry walls can be filled with a foamed-in-place insulation.

Blown-in and foamed-in-place wall insulation must be done by an experienced professional.

Getting A Good Product

To be sure you're getting a good product, choose insulation with a Canada Mortgage and Housing Corporation (CMHC) acceptance number or Canadian General Specification Board (CGSB) number. These numbers appear on the package and assures that the material meets health and safety standards.

A Note About Vapour Barriers

Protect against moisture damage by installing a continuous vapour barrier wherever possible. Some insulations have vapour barriers attached. Where this is lacking, a good vapour barrier is a continuous sheet of polyethylene film. Even vinyl wallpaper can be a help. Be sure to install the vapour barrier on the warm side of the insulation.

Do It Yourself or Hire a Contractor

You may want to insulate your home yourself and save money. Or you may want to leave it to a contractor. The choice is yours. Remember foamed-in-place and blown-in insulation work must be handled by a professional.

Government Help is Available

Governments can help you pay the cost of your insulation job.

- The Federal Government's **Canadian Home Insulation Program (CHIP)** provides householders with taxable grants up to \$500 for insulation materials and labour. At present, your house must have been built

before January 1st, 1961 to qualify. For further details and an application form contact: The Canadian Home Insulation Program, Post Office Box 1270, Postal Station T, Toronto, Ontario M6B 4A4. Call 365-6000 (in Toronto) or toll free 1-800-268-1818.

- Ontario provides financial assistance through the **Ontario Home Renewal Program (OHRP)** to assist eligible homeowners in repairing their homes. For more

information, contact your municipal office or: Ontario Ministry of Housing, Community Renewal Branch, 60 Bloor Street West, 8th Floor, Toronto, Ontario M4W 3K7. Telephone: 416-965-2826.

- Ontario has **removed sales tax** on approved insulation, weather stripping and caulking among other conservation materials. This assistance amounted to \$25 million in the fiscal year 1979/80.

For More Detailed Information

The Federal Government has an excellent book called **Keeping the Heat In** that provides more detail on the topics introduced in this pamphlet. Write: **Keeping the Heat In**, P.O. Box 3500, Station C, Ottawa, Ontario K1Y 4G1. We suggest that you obtain this free book before you start to insulate.

The Well-Insulated House

